

# INTERNAL AUDIT

CIS Disaster Recovery Exercise  
Advisory Engagement

August 10, 2020





## Advisory Memorandum

### Background

Disaster Recovery (DR) planning is the technical component of the business continuity management process that ensures uninterrupted availability of key systems and resources required to support business functions in the event of a disruption. Successful execution of disaster recovery processes requires a sound business continuity program and periodic testing of infrastructure, applications and supporting processes to ensure disaster recovery readiness when needed.

The Enterprise Resiliency Organization (ERO) team within Enterprise Operations provides the framework and administers the Enterprise Resiliency Program (ERP). ERO collaborates with relevant business and technical stakeholders to complete the business impact analyses which include recovery time objectives that support disaster recovery objectives. Periodic DR exercises are scheduled and managed by ERO, bringing together business and technical stakeholders to determine exercise objectives and scope, which provide reasonable assurance for a successful cutover to the disaster recovery facility when needed.

### Objectives and Scope

Internal Audit was asked to participate in the exercise and provide advisory services by attending planning and post-exercise meetings, observing the exercise, and providing feedback to IT Management regarding:

- Whether the exercise met the formalized disaster recovery failover plan objectives
- Validity of IT observations and recommendations drawn from the exercise
- Strengths and opportunities for improvement noted during the engagement

### Results

IA participated in the CIS Disaster Recovery Exercise and agreed with management's conclusion that the exercise met the failover plan objectives. Results of the exercise indicate the following:

#### Strengths

- Operational procedures maintained by the technical teams to facilitate failover processes were executed with minor errors that were corrected during the exercise. Operational procedures are updated frequently throughout the year and will be revised following the exercise.
- Business unit representatives executed test scripts in the DR environment and again after failing back to the primary data center with minor issues encountered and resolved.
- The exercise was completed in less than half of the time delineated by the recovery requirements defined in the Business Impact Analyses.
- Periodic status reports were provided to senior management timely throughout the exercise including relaying information related to minor issues under evaluation and in process of resolution.
- One process change was discussed during exercise execution and the appropriate change management process was followed.



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- A post-exercise meeting was held with all technical teams to document feedback and create a list of items requiring follow-up.

### Opportunity

- One application which was recently migrated from an on-premises solution to a Software as a service (SaaS) solution encountered more significant errors in the exercise. The vendor was engaged, and additional research will continue to be performed as needed. This application was a known risk prior to the exercise since it was recently migrated to a SaaS-based solution.

Additionally, IA provided the ERO with minor process enhancements for consideration including:

- Technical department managers or directors should review and/or approve operational procedures (run books) prior to the exercise and/or prior to hurricane season as a more structured process to validate completeness and accuracy and add an additional layer of scrutiny. Comments during exercise execution indicated a need for additional reviews of equipment lists, automation, system blueprints, etc. A more structured approach to technical team operational procedures may eliminate some minor errors occurring during execution and ensure documentation is comprehensive.
- Business unit representatives and the technical teams should continue to review application validation scripts prior to the exercise to promote an improved understanding of application functionality and data availability at both sites. Questions were raised during the exercise by business representatives providing functional application testing. Enhanced direct discussions between the teams ahead of the testing should be considered.
- Review operational procedures and/or the overall Run Book for potential amendments in some areas to indicate parallel tasks which can be executed for additional expediency in failover. The current overarching task list is documented in a serial method and the test teams determined the opportunity for some parallel tasks during the exercise. These should be discussed within the teams and adopted if possible, to provide additional efficiencies.

We would like to thank management and staff for their cooperation and professional courtesy throughout the event.



## Distribution

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